DOCUMENT RESUME

ED 036 872 | 24 | CG 005 171

AUTHOR	Stake, Robert
TITLE	Comments on Professor Glaser's Paper Entitled "Evaluation of Instruction and Changing Educational Models." Center for the Study of Evaluation of Instructional Programs Occasional Report No. 14.
INSTITUTION	California Univ., Los Angeles. Center for the Study of Evaluation.
SPONS AGENCY	Office of Education (DHEW), Washington, D.C. Bureau of Research.
BUREAU NO	BR-6-1646
PUB DATE	Sep 68
CONTRACT	OEC-4-6-061646-1909
NOTE	11p.; Paper from the Proceedings of the Symposium on Problems in the Evaluation of Instruction, Los Angeles, California, December 13--15, 1967
EDRS PRICE	EDRS Price MF-$0.25 HC-$0.65
DESCRIPTORS	Critical Reading, Decision Making, *Educational Innovation, *Evaluation, *Instruction, Instructional Improvement, *Learning, *Measurement, Models, Objectives

ABSTRACT

Professor Stake feels that Professor Glaser's paper does not give adequate attention to how descriptions and judgements of the instructional process can be used to facilitate educational decisions. He also asserts that behavioral specification, as it is usually defined, is often impractical and unnecessary, and he challenges the primacy of goal specification as a first logical step in instruction or evaluation. Objectives must be reported, but attention must be given to how they change over time and the priority given by different groups to different objectives. (Author)

ED036872

CSE Report No. 14
BR-6-1644
PA-24
CG

COMMENTS ON PROFESSOR GLASER'S PAPER ENTITLED "EVALUATION OF INSTRUCTION AND CHANGING EDUCATIONAL MODELS"

Robert Stake

CG 005171

Center FOR THE
Study of
Evaluation
OF INSTRUCTIONAL
PROGRAMS

University of California, Los Angeles, September 1968

CO-DIRECTORS

Merlin C. Wittrock Erick L. Lindman

ASSOCIATE DIRECTORS

Marvin C. Alkin Frank Massey, Jr. C. Robert Pace

The CENTER FOR THE STUDY OF EVALUATION OF INSTRUCTIONAL PROGRAMS is engaged in research that will yield new ideas and new tools capable of analyzing and evaluating instruction. Staff members are creating new ways to evaluate content of curricula, methods of teaching and the multiple effects of both on students. The CENTER is unique because of its access to Southern California's elementary, secondary and higher schools of diverse socio-economic levels and cultural backgrounds.

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION

THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL OFFICE OF EDUCATION POSITION OR POLICY.

ED036872

COMMENTS ON PROFESSOR GLASER'S PAPER ENTITLED "EVALUATION OF INSTRUCTION AND CHANGING EDUCATIONAL MODELS"

Robert Stake

University of Illinois

From the Proceedings of the

SYMPOSIUM ON PROBLEMS IN THE EVALUATION OF INSTRUCTION

University of California, Los Angeles
December, 1967

M. C. Wittrock, Chairman

Sponsored by the Center for the
Study of Evaluation of Instructional Programs

The research and development reported herein was performed pursuant to a contract with the United States Department of Health, Education, and Welfare, Office of Education under the provisions of the Cooperative Research Program.

CSEIP Occasional Report No. 14, September 1968
University of California, Los Angeles

COMMENTS ON PROFESSOR GLASER'S PAPER ENTITLED "EVALUATION OF INSTRUCTION AND CHANGING EDUCATIONAL MODELS"

Robert Stake

I received a draft of Bob Glaser's paper several weeks ago. There was postage due. Bob had missed the mark by a factor of .64. On payment of the additional 28 cents, I reflected on the possibility of this being an omen: Was he going to miss the mark on his theory of the evaluation of instruction as well?

I think he did.

Let me refresh your memories. He presented six components of a model of instruction. As I understand them, they were the specification of objectives, the diagnosis of entry behavior, the selection of instructional procedures, the surveillance of instruction, the modification of instruction, and the modification of the system. He spotted needs for measurement and evaluation within each of the six. He claimed that the needs for measurement and evaluation were fluid, subject today particularly to three forces: increased emphasis on cultivation of skill and understanding of the basic discipline, increased emphasis on the continuity of education through the life span, and increased emphasis on individual instruction, passing it from the ideal to reality.

Bob presented a model of instruction and discussed some of the implications for evaluation. He did not develop a model or a theory for the evaluation of instruction. Earlier Ben Bloom talked about evaluation within a theory of testing; Bob Glaser talked about evaluation within a theory of instruction, not a theory of evaluation. Perhaps if Merl Wittrock had given them behavioral

specifications, we would have covered by now a theory of evaluation. I am not claiming that he should have. I am just saying that in spite of the original titles of the morning's paper, we have not yet considered a model or theory of evaluation in the sense that either Ben Bloom or Gene Glass define it.

Bob Glaser indicated six functions that require extensive measurement. There are many responsibilities for student testing: there are observations to be made, descriptions to be recorded, judgments to be set, decisions to be made. Instruction requires all of these. Evaluation of instruction, as separate from evaluation within instruction, requires them, also. Bob Glaser has not told us how the descriptions and judgments of the instructional process might be fitted together to provide us with the information we need to make educational decisions.

Repeatedly Bob referred to his system, or the phenomenon or the task, as one of individual student learning. This is an important focus. With Maurie Lindvall and other colleagues at the University of Pittsburgh Oakleaf School, Bob has helped us to realize how, in this day of large student bodies, we can individualize instruction. But our concern is the evaluation of instructional systems.

This evaluation is considerably more than the aggregate of assessment of progress for all children at all levels. Here the unit of analysis is not the child but the classroom, the school system, or the nation. The satisfaction we get from its operation is the focus. The changes we can make to increase our satisfaction with the system are our focus. It is a different focus.

Where we might have expected him to discuss evaluation *of the system* (in his sixth section), we found only a mention of the need for evaluation, plus an inspirational quote from Lee Cronbach. Bob did not consider any of the more recent literature on evaluation. What of Mike Scriven? What of Michaels and Metfessel? What of the writings which have attempted to apply operations analysis, cost-benefit analysis, and decision theory to the instructional system?

Perhaps I am wrong in expecting Bob Glaser (and many of my colleagues specializing in measurement) to expand the concept of evaluation beyond ascertainment of how well objectives have been accomplished. Perhaps it would be more useful to postpone the call for a broader definition until we are doing a satisfactory job of a more limited kind. But I think not. It is important to help today's educator discover the worth of instruction. *Now* is the time for the technologist to come to the aid of his colleagues.

There are many points in the paper with which I enthusiastically agree. I warmed with satisfaction on hearing Bob's declaration that it is worthwhile trying to learn the nature and judge the quality of the teaching, whether or not we can measure the extent and judge the quality of the resulting student content. I was pleased to hear his emphasis on the need for continuous, automatic correcting and system-wide correcting techniques for evaluation.

Bob's concern for interaction is well placed. Although I am not encouraged by the research results from Larry Stolurow, Jacob Beard, and others, I believe that we should continue to anticipate

interaction between instructional methods and student characteristics. If there are important accommodations of instruction to children, in addition to those in the area of pacing and step size, we should learn the additional real and indirect cost of individualization.

There are many important bits and pieces of the paper that I would like to discuss at length. But I feel I should use the remaining time on just one.

Bob Glaser spoke of the "now platitudinous assertion" of the necessity for behavioral objectives. "Platitudinous" means "dull" and "insipid," and I wouldn't have been so uncharitable as to call the assertion that. It also means "commonplace." That it is. It does not mean "no longer needing validation." I challenge the validity of the role that he gives to behavioral objectives.

I object to his statement that the first responsibility in evaluation is the specification of objectives. Much of what he said in the paper conveys the conviction that student-outcome behavior should be specified--that is, committed early to formal language, English language. He supports those who say that all human accomplishment can be objectively, operationally described. So do I. He also says, as a regular initial step in instructional evaluation, objectives should be formally stated. For some large-scale instructional projects, I agree. For classroom evaluation, I do not. I claim that it is impractical, unnecessary, and distractive to develop and evaluate curricula with high reliance on behavioral objectives. Analysis does not necessarily aid performance. A designer of "paint by numbers" kits might point out, as

I believe information theorist Claude Shannon has, that any painting is essentially a collection of areas of discernably different solid colors. It does not follow that painting by numbers is the best way to paint a Mona Lisa.

Few of you in the audience, in your creative, scholarly work, operate from a table of specified objectives. The quality of painting or researching or instruction we are getting from today's best specifications is greatly inferior, as I see it, to what we can get from the best craftsmen. Professional education does not have the talent for specifying objectives. It does not make sense to me to base evaluation plans on a talent we do not have, nor can afford. The price of gaining and using this talent, I claim, is one hundred times the price of the instruction itself. Impractical, I say.

I am not saying behavioral specification will not work because teaching is an art rather than a science. I am saying behavioral specification will not work because teachers are artists and artisans, not linguists and philosophers; and it costs too much for us technologists to talk to them in a language they do not understand.

It is right for us to continue to develop a technology of education. Our plans for a technology should be practical. The technology we build should not require a revolution but should be realistic, designed with an eye to the cost of institutionalization. As much as possible, we should capitalize on present teaching skills and commitments. To insist on behavioral specifications is to ask for new evaluation skills and commitments. I believe that a high quality of instruction and a high quality of evaluation can be developed without this specification.

There are other ways of representing objectives. Obviously, we can use examples. An educator, by a nod of the head, can indicate which representation of behaviors is close to his ideals. We can film behaviors. We can describe them in anecdotal form. We can use test items to represent goals. There are alternate ways of specifying objectives, further, perhaps, from some true intent that lies within the mind or heart of an educator; but these are specifications that are within our budget of talent and patience. With them we can get along without formal goal statements.

Some of these are not popular notions with some of you, I know. It may be only your politeness and pity that quiets your irritation. Obviously I am not criticizing Bob Glaser, but the Learning Research Center, the Center for the Study of Evaluation of Instructional Programs, the Southwest Regional Laboratory, the National Society for Programmed Instruction, and all those Camelots of behavioral linguistics.

My first two points are that behavioral specification, as we usually define it, is often impractical and unnecessary. I will now challenge the placement of goal specification as a <u>first logical</u> step. Bob and others have agreed that you do not do all your goal specification first. You modify as you go along. So, we agree on that. The point I want to make is that there is a still prior logical step that Bob did not mention. Gene Glass has already referred to it. We need to consider the vital question of goal competition and goal selection. Goal selection is an integral part of instruction. We psychologists are not without qualification for dealing with preferences and priorities. Yet we have, I believe,

avoided incorporating goal selection into our evaluation technology so far.

The other day I refreshed my impressions of the difference between the goal domain of the programmer and the goal domain of the classroom teacher. I looked over the programmed text on population genetics that Dick Anderson and his lab workers wrote for the BSCS biology project. I also visited a biology class at the University High School in Urbana. Worlds apart!

Both were smooth, provocative, response-oriented operations but were seeking quite different responses. The program writers knew what specific responses they wanted. The teacher did not. The aim of the classroom teacher was to provide opportunity for reflection and reaction which she could use in an operant conditioning paradigm. She was willing to pick up, reinforce, and build upon many kinds of responses. More generally, may I say that our qualified classroom teachers seek a response with potential for development. They scan hundreds of desired responses to find any one of many desired responses. Sometimes the ideal responses can be elicited directly; many times not. Some responses are suspect when directly elicited. The skilled teacher has learned to recognize a set of desired behaviors and to reinforce them and to shape them when they occur. The context is deemed very important. What is the classroom situation? What is the student's situation? The presence of these responses in terms of a problem context, in an affective context, is very important.

Bob Glaser made the point that there can be important interactions between student type and teaching method. These teachers

show me that there can be important interaction between student readiness and teaching method. We need more research on that. The skilled teacher has many objectives to work from. She is not very concerned about getting them all done. She says, "There's another teacher coming along next year, or next hour." Each one will seize an opportunity to do particular objectives well. They will reassign priorities to goals on the spot. This reconsideration of priorities is the important purchase that we make when we choose skilled teachers rather than programmed material.

The educational evaluator must deal with priorities. To give priorities to goals, he must know what those goals are. But the goals of educators increase and grow. The evaluator cannot avoid early definition of general goals, but he cannot ignore changing goals and changing goal priorities. As a first logical step, the instructional specialist may consider how to define and operationalize objectives. As a prior logical step, the curriculum and evaluation specialists should consider how to define and give priorities to objectives.

Selection of goals and revision of priorities are important components of instruction. They belong in a model of instruction; they belong also in a model of evaluation. Our technology should not ignore the fact that educators need more rational and objective procedures for specifying the competing priorities of different instructional goals.

The mark of evaluation is information for decision-making. It is more than a by-product of good instruction. I think Bob owes us another 28 cents worth.